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THE NEW YORK

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☞See Advertisement on last page.

POETRY.

GOD SPEED THE RIGHT.

Now to Heaven our prayers ascending—
God speed the right!
In a noble cause contending—
God speed the right!
Be our zeal in Heaven recorded,
With success on earth rewarded,
God speed the right!

Be that prayer again repeated—
God speed the right!
Ne'er despairing though defeated—
God speed the right!
Like the good and great in story,
If we fail, we fail with glory,
God speed the right!

Patient, firm and persevering,
God speed the right!
Ne'er the event nor danger fearing,
God speed the right!
Pains, nor toils, nor trials heeding,
And in Heaven's own time succeeding,
God speed the right!

Still our onward course pursuing—
God speed the right!
Every foe at length subduing.
God speed the right!
Truth our cause, what'er delay it,
There's no power on earth can stay it,
God speed the right!

HAVE I PAID THE PRINTER.

When the cold storm howls round the door,
And you by light of taper,
Sit closely by the evening fire;
Enjoying the last paper—
Just think of him whose work thus helps
To wear away the winter;
And put this query to yourself—
Have I paid the Printer?

From east and west—from north and south,
From lands beyond the water,
He weekly brings you "lots of news."
From every nook and quarter;
No slave on earth toils more than he,
Through summer's heat and winter;
How can you for a moment, then,
Neglect to pay the Printer?

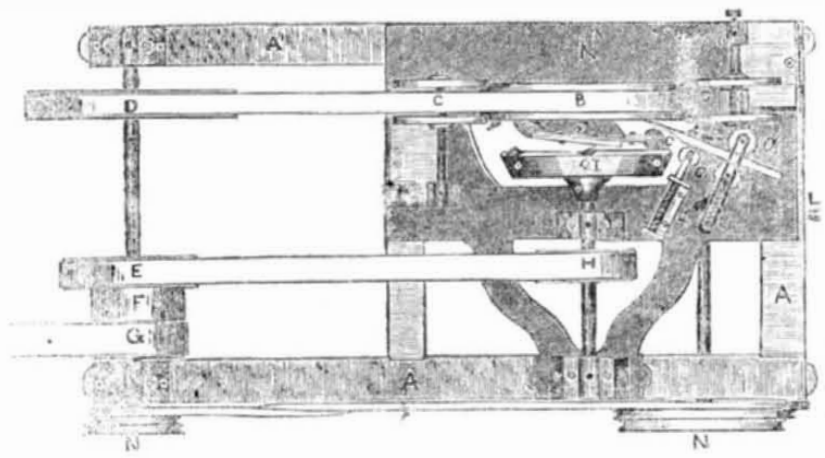
Your other bills you pay,
Wherever you do go, sir—
The butcher for his meat is paid,
For "sundries" is the grocer;
The tailor and the shoemaker,
The hatter and the vinter—
All get their pay—then why neglect
To settle with the Printer?

A Dandy.

Some say there's nothing made in vain,
While others the reverse maintain,
And *prove* it very handy,
By citing animals like these:
Musquitoes, bed-bugs, crickets, fleas,
And worse than all a DANDY.

A late writer wishes to know what more precious offering can be laid upon a man's heart than the first love of a pure, affectionate girl, with an undivided interest in eight corner lots, and fourteen three story houses? We give up.

JUDSON AND PARDEE'S STAVE DRESSING MACHINE.



The above cut gives only a representation of this machine in the manner of looking down upon the face of the frame, therefore the geering underneath cannot be seen; but from this vertical view, a good mechanic will be able to trace the relation of the different par and perceive the beauties of the whole machine and its adaptations to the purpose, so much to be desired and so essential to the great and rising trade of American cooperage. A A A, is the frame. K is the iron bed plate represented by the dark shading. B represents the large knife or cutting roller, somewhat hid by the belt which drives it from the power roller D. C C, are friction rollers edged as it were to run upon a rail to keep the large knife roller steady, and underneath is another for the same purpose, all three set equi-distant, like at the points of a triangle E H are rollers connected with another belt to drive the small knife roller I. G is a driving belt on an idle roller near the motion or drive pully F. N N, are pulleys which are driven by a cross rope belt to drive a horizontal shaft, on which is the notched wheel which moves the two vertical shafts or feeding rollers (two biting wheels) *a a*, and which are now represented as feeding a stave into the knife rollers. E is a spiral spring which makes the feeders accommodate themselves to the bendings of the staves. *b* is a rest on a straight line which keeps the stave up to the other two smooth rollers with springs *c d*, which act as subordinate to the biting feeders. C is another rest and roller to keep firm the small cutting roller T, between which and the large knife roller B, the stave passes and comes out shaved through the centre of B, the large cutting roller which is open. L is the lever or handle to set the feed geer in motion by lifting the wheel which drives the feed shafts.

The nature of this invention and improvement consists in combining and arranging two revolving rings or wheels having cutters on their opposing surfaces next each other for shaving the stave transversely on both sides at once, producing a stave the cross section of which is the segment of a circle—the diameter of which is to be greater than the diameters of the wheels, and the curve of the stave being variable at pleasure, for all kinds of casks. The position of the whole geering can be changed to suit the angl of the stave's curvature, as the stave moves on the cutters it being the hypothenuse of a right angled triangle formed by the parallel lines on which cutters are placed . the which machine constructed on the theorum of the triangle, and considering a circle (for the curvature) to be a regular polygon of an indefinite number of sides, the sum of the sides being the perimeter of the circle.

A patent was granted for this machine on the first of last May. It can cut the most curved and rough split staves, as described in No. 38 Scientific American, The company is now prepared to sell out rights on reasonable terms. Address Mr. Leonard Pardee or Mr. Isaac Judson, New Haven, Ct. A right will not be sold from a mere model—the machine being in operation successfully. It cannot but be of vast benefit to our country as it destroys at once the rough slavish work of cooperage and lets the cooper occupy his hands with the most light and easy parts of his trade.

Peeled the Bark Off.

The Boston Bee has the following good one. —A raw down easter came to this city a while ago, and hired out to a cabinet maker within a stone's throw of our sanctum. He understood lots of things, and like a true Yankee, managed to pass for a good deal more than he was worth. The proprietor one day showed a very pretty mahogany veneered bureau to the mechanic, and told him to "*smooth it off*," as the purchaser would call for it in the course of the morning. By-and by, Johnny Raw, made his appearance in the warehouse.

"Well, John, have you made that bureau shine well?"

"Wall, I guess it don't look bad, but t'was a 'tarnal job though. I could'nt get at it any other way, and I took the fore-plane, and *peeled the darned bark all off!*"

A Puzzler.

A child was born in Denholme on the 11th of April last, having a father and mother, grandfather and grandmother, brother and sister, uncle and aunt, all residing under the same roof; they call it brother, son, nephew, or grandson, and yet there are in all but three persons.

Losing a Character.

Hastings of the Albany Knickerbocker gives the following good one.

A young Irish servant girl, coming from Albany recently in one of the night steamers, had the bad luck to lose the "reccommend" which had been given her on leaving her last place. She brought, however, the accompanying rather dubious "ticket" which she presented to a neighbor of ours; "This is to say, that Kathleen O'Hazen had a good character when she left Albany, but she lost it on board the steamboat coming down from Albany.—Tim Murphy, Cherry street."

Progress of the Republic.

The *Indiana State Journal* says that a Mrs Devore, of Johnson County, gave birth on Sunday evening 30th ult., to four healthy children—one boy and three girls, the whole of them weighing 9½ pounds. The children bid fair to live, and the mother is doing as well as could be expected under the circumstances.

What a Day may bring forth.

On the 1st inst, Mrs. Margaret Day, wife of Geo. W. Day, of Bucks county, Pa., was delivered of four children, three girls and a boy.

LIST OF PATENTS

ISSUED FROM THE UNITED STATES PATENT OFFICE,

For the week ending June 26th, 1847.

To William Henry Fox Talbot, of Lacock Abbey, England, for improvement in Photographic Pictures. Patented June 26, 1847.—Date of English patent unknown.

To James Nasmyth, of Patricroft, England, for improvement in Steam Pile Drivers. Patented June 26, 1847. Date of English patent not known.

To John McCune, of Senecaville, Ohio, for improvement in machinery for cutting Tenons in the ends of Spokes. Patented June 26, 1847.

To John Dunlap, of Geneva, Wisconsin, for improvement in Harvesting Machines. Patented June 26, 1847.

To Ross Winans, of Baltimore, Md. for improvement in Cars for transportation of Coal, &c. Patented June 26, 1847.

To Albert G. Bartlett, of Oxford, Ohio, for improvement in Trusses. Patented June 26, 1847.

To Wade Haworth, of New York, for improvement in machines for stuffing horse collars. Patented June 26, 1847.

To Mahlon Gregg of Philadelphia, Pa., for improvement in Rotary Engines. Patented June 26, 1847.

To Daniel Winder, of Hagerstown, Md. for improvement in apparatus for raising Water. Patented June 26, 1847.

DESIGNS.

To James Wager, of Troy, New York, for designs for Stoves. Patented June 26, 1847.

To Samuel D. Vose, of Albany, New York, for design for Air-tight Stoves. Patented June 26, 1847.

A Yankee Pedlar.

See here, mister, don't you want somethin in my line tew day? I've got a new machine for pickin' bones out of fishes. Now I tell you it's a little the darndest thing you ever did see. Science, you know, is great, and the world is great, and the Atlantic Ocean is great and the whale is great, but science is greater than all of them; it's bigger than a meetin' house—it takes in all things—it explains parables that will tell you where to find the gizard in a codfish: it makes out the wonderful diskiveries; *Kulumbus* made out tew diskiver "*Cape Cod*," and by the aid of his second cousin "*Epluripus Unum*," made out tew diskiver "*America*." Wall, now the people all thought that was somethin' wonderful, but I tell you, this here machine for picking bones out of fishes, beats anythin' there is a goin'; all you have tew dew, is tew set it on the table, and turn a crank, and the fish flies down your throat, and the bones right t'other way. Wall, there was a country "greenhorn" got hold on it tother day, and he got a turnin' the crank the wrong way, and I tell you the way the bones flew down that ar feller's throat couldn't be beat; why it stuck the feller so full of bones that he couln't git his shirt off for a hull week.

A Boy adopted by a Wolf.

An officer of rank in the Indian army writes from Ferazpoor, that a male child, about seven years of age, has recently been discovered by some police in the den of a wolf. He cannot speak, eats only raw flesh. The boy is claimed by parties who say they lost him four years ago, when he was three years old; and it is supposed he has led a wolf's life ever since. The magistrates still retained possession of this strange foundling, when the latter detailing these facts were written from the East Indies. It looks certainly like a wolf's story.

The Lowell Compend says:—"We have heard of a wit who kept a nutmeg grater on his table in order to say, when a *great* man was mentioned, "there's a *grater*."

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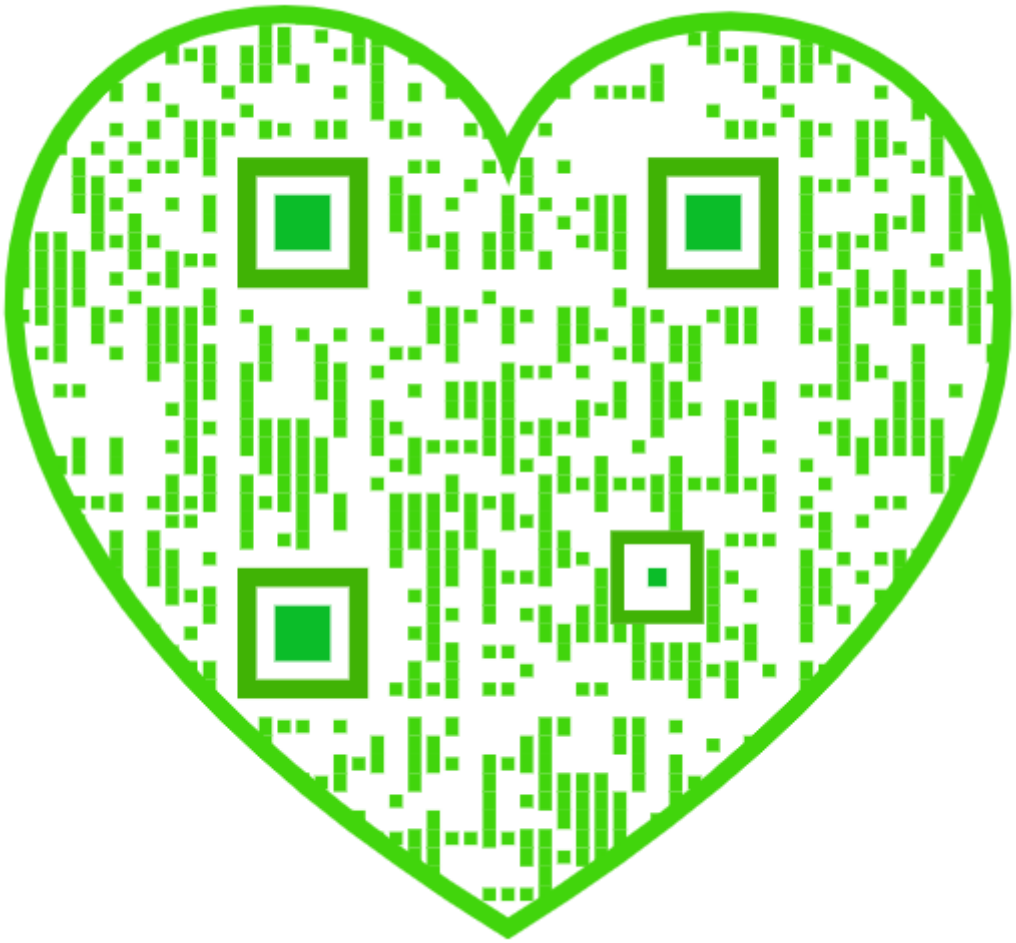

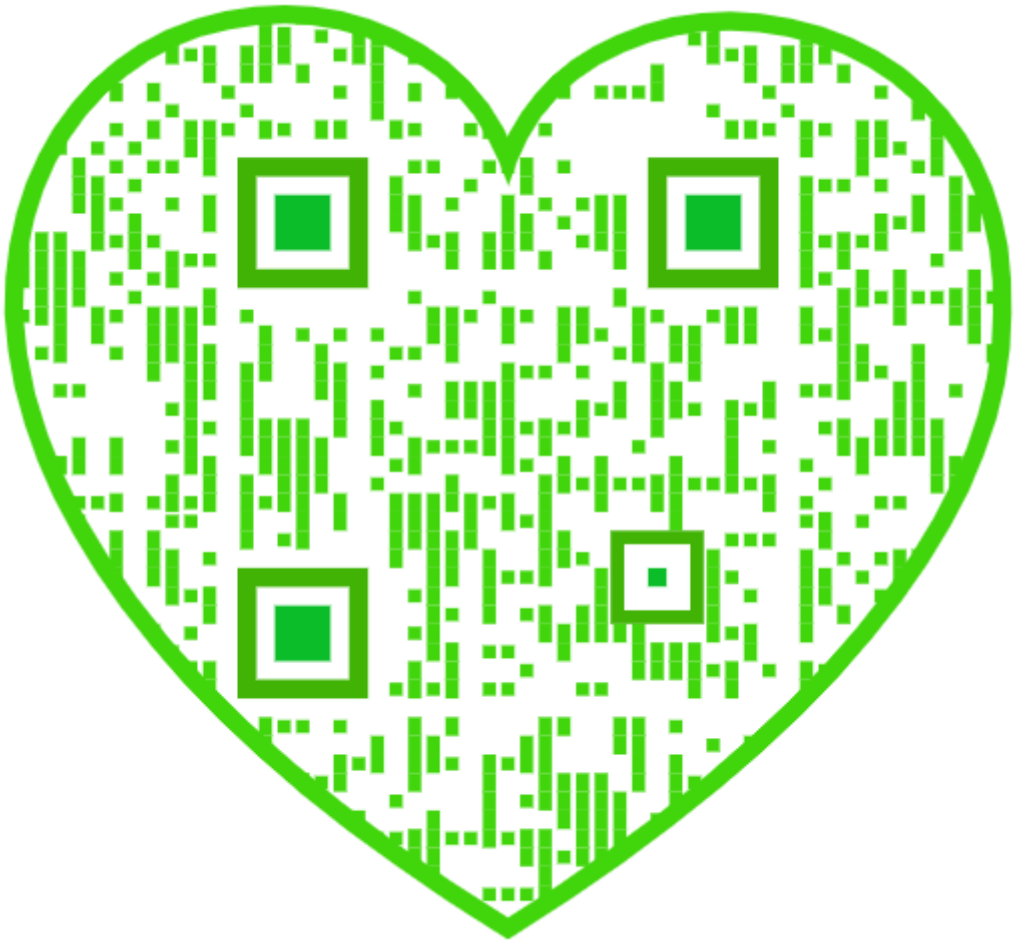

Candles.

Wax contains 81.75 parts of carbon in 100, which generate by combustion 300 parts of carbonic acid gas, and 125 grains of wax constituting the average consumption of a candle per hour, these will generate 375 grains of carbonic acid, equivalent in volume to 800 cubic inches of gas. According to the most exact experiments on respiration a man of ordinary size discharges from his lungs 1632 inches of carbonic acid gas per hour, which is very nearly double the quantity produced from the wax candle. Hence the consumption of two such candles vitiates the air much the same as the breathing of one man. A tallow candle 3 or 4 in the pound, generates nearly the quantity of carbonic acid as the wax candle; for though tallow contains only 79 per cent of carbon, yet it consumes so much faster as thereby to compensate fully for the difference—hence we have the relative vitiation of the air by the breathing of man and the burning of candles.

An Elopement and Rescue.

The Buffalo Express says that the faithless wife of a man residing in Canada, left her house with a paramour a few days since, taking from her husband the sum of $500, with which he had just returned from England. The injured husband followed the guilty pair to Niagara Falls, where he crossed the river, and taking the cars, arrived in Buffalo before the steamboat containing the runaways—met the interesting couple at the docks; recovered his $500 *and* his wife, and after giving the disappointed Lothario a few kicks, returned to her Majesty's dominions.

Glass for Piano Keys.

It will be seen that they are beginning to use ruby glass for this purpose in England.—We have only to say that the same plan was proposed by C. H. Packard, of Bridgewater, Mass. some time ago, and that he has been engaged, we believe in perfecting his invention, and that he is the American inventor of this substitute for ebony and ivory in the keys of organs and pianos.

The Truth.

Good old Wesley said, "He that is nurturing self-love in his child, is nurturing a devil." We believe it. Mother, do you think of this when you are "tipping off" that little daughter of yours in all the gay, foolish frippery and finery of the day; making her proud and haughty as a little Lucifer? You are murdering the soul; planting a dagger in your own bosom!

Direct from the Atlantic to Detroit.

The Canadian yacht Alice, belonging to the Hon. H. Killaly, bound to the Sault Ste Marie, arrived at Detroit two weeks ago. She is the first vessel that has reached Lake Erie direct from the ocean. She is the herald of full freighted vessels that in a short time will carry their cargoes unbroken from the shores of Europe to the extremity of Lake Michigan.—What commercial wonders will not the improvements of the present age effect!

Fires.

At St. Louis on the 12th inst. a fire destroyed the carriage factory of Fallon and Wright and other buildings. Fallon and Wright lost $10,000, no insurance. Charles Mallow, cabinet maker, about $5000, no insurance.

The steel furnace of Robert S Johnson, at Lumbertno, Pa., was destroyed by fire on Thursday last.

Tne corn and steam mill of Patser and Kelsey, at Algiers, near New Orleans, were burned on the 13th inst. Loss $8000.

Pennsylvania Coal Trade.

The Pottsville Miner's Journal calculates the amount of coal exported from thence for the season averages about 370,219 tons. The price of white ash coal Philadelphia is $3,75 per ton in lump, and red ash from $3,75 to $3,37 1-2. Lehigh at the same place selis at $3,87 and $4 per ton.

Great Telegraphic Experiment.

New Haven was put in telegraphic communication with Toronto, Upper Canada, recently, and messages were instantly exchanged between the two cities. The route is via New York, Albany, Rochester, Buffalo, and then crossing the Niagara river below the falls, passes round Lake Ontario to Toronto, the entire distance being *nine hundred miles!* The experiment was a most successful one, and the distance was overcome with as much apparent ease and promptness, as between New Haven and Hartford. It was the longest distance ever traversed by the lightning in a continuous unbroken line.

A Hermit.

For the last fifteen years there has lived in a ravine near the eastern end line of the city of Cincinnati, a man known as "old Job Crawford the Hermit." He lives entirely alone, in a little hut built with his own hands. He holds communication with nobody, yet is held in a sort of respectful awe by every body. The children of the neighborhood sometimes in curiosity, approach the rude brush fence that environs his humble habitation, but the old man pursues his avocations without even a look of recognition—and so with all, young or old. What means he employs for livelihood is known to no man but himself—but, that he does live is apparent.

Washington City.

The public grounds at the Capital comprise 540 acres, as follows: President Square, 83 acres; Park 28 acres; Capital Square and Mall, 227 acres; other squares, 202 acres. The Government has expended there, since the year 1800, the sum of $10,035,454. The President's house and treasury building, each, cost $700,000. The patent office and general post-office, each $50,000,

A Colapse.

Two weeks ago last Sunday, the steamer Red Wing collapsed a flue as she began to ascend the first bar of the Rock Island Rapids, Ill. Six persons were scalded, three dangerously. We learn by the Fortune, arrived here on Tuesday morning that two of the unfortunate scalded persons have died, and that a third was not expected to live.

Southern Crops.

Farmers have commenced cutting their grain in several parts of Virginia. The harvest will be more than an average. The quality of the Wheat is said to be very superior. The grain is ripening fast in the vicinity of Fredricksburg and along the Rappahannock. Preparations are making to commence harvesting in all quarters.

British Post Office.

The number of letters that pass through the post office, annually, for London and its environs alone, is 75,000,000. They average four inches in length, and three inches wide. If this immense number of letters were laid in a horizontal position, lengthways, they would reach to the extent of 4,734 miles.

Lowell.

There are 13 manufacturing corporations in this city, embracing a capital stock of $11,490,000, and numbering 45 mills. These mills employ 7,915, female and 3,340 male operatives. There are other unincorporated manufacturing establishments in the city employing 1,000.

Collection for Ireland.

The collections of the United States in favor of Ireland, amount thus far, it is estimated, to more than $400,000.

Flour.

At Rochester the amount of Flour weighed at the lock east of this city, from the opening of navigation to 12 o'clock on Saturday last, was 946,025 barrels—of which about 175,000 barrels were shipped from Rochester.

The Road to Mexico.

The whole road from Vera Cruz to Mexico is paved in a manner that streets in our cities are. The bridges over the streams and ravines are of solid masonry, and excellent workmanship.

Forty million bushels of barley are annually consumed in England in the production of malt.

RAILROAD NEWS.

Rapid Travelling.

The distance from Allyn's Point, (New London) to Worcester,—66 miles was run on Tuesday last, the 22d inst., in ONE HOUR and 52 minutes including three stops. The engine which performed this feat is called the Col. De Witt, built by Rogers, Ketcham and Grosvenor of Paterson, N. J.,

New York and Boston Railroad.

A resolution passed the Connecticut House of Representatives on Tuesday authorising the N. Y. and Boston Railroad Co. to commence operations when the sum of $200,000 is subscribed to their stock—but prohibiting them from building the bridge over the Connecticut, at Middletown until the sum of $2,000,000 is subscribed.

Portsmouth and Concord Railroad.

The annual meeting was holden on the 12th alt.—The report of the directors states, "that as the amount of stock now subscribed exceeds $600,000, it will be in their power soon to put the whole line of the road from Portsmouth to Concord under contract."

Mad River and Lake Erie Railway.

The Springfield Republican states that the commissioners of Clark county have subscribed 500 shares ($25,000) to the Lake Erie road, and paid for it in stock of the Little Miami Company.

Niagara and Detroit Railroad.

In the Legislature of Canada, last Friday evening, there was an animated discussion on this bill. For the second reading 34, against it 12—the members of the Government being all in the minority.

Great Outrage.

The Pittsburgh Chronicle states that a respectable young lady, while walking on last monday evening with her brother, between Hand St. and Garrison-alley, was seized hold of by one of a gang of villains, and vengeance threatened if she did not immediately go with them. The lady screamed, and offered all the resistance she could; indeed she was almost thrown into hysterics by the fright. The brother implored them to let them go home, and informed them that she was his sister, but all to no purpose The wretch who had hold of the girl struck her a desperate blow upon the forehead with a brick or club, which created a fearful gash. The young brother screamed for help, when his life was threatened if he did not stop. The girl was insensible from the blow she received, and the inhuman monsters were dragging her toward the alley, when a lady living in the neighborhood heard the noise and came to the door. On the appearance of the light the villains fled towards the river, leaving the poor girl senseless upon the pavement, and her young brother nearly dead with fear.

A Fish with a Gold Ring.

We have in our possession, says the Charleston, S. C. Evening News, a gold ring which was found yesterday in a large black fish, while it was being prepared for the table of one of our subscribers. Upon it are cut two pretty-looking doves, in the attitude or position that the poet has been pleased to denominate "billing and cooing," and also the words "for ever constant." How this "golden bait" came within the corporate limits of this voracious member of the finny tribe, our readers must conjecture for themselves. It may be that some one of them will recognize the ring as his or her own. If so, we will gladly restore it.

Washington Monument.

The Common Council of this city have granted to the Washington Monument Association, a site in Hamilton Square, whereon to erect a monument to the memory of Washington.

Magnetic Telagraphs.

This system of communication in the United States at this time, comprises an aggregate distance of 1,575 miles. The lines under contract, and in course of construction, comprises 4,974 miles—showing an aggregate of complete and unfinished lines of 6,549 miles.

Female Labor.

Not far from $5,000,000 are yearly earned in Massachusetts, by females employed in the various factories and manufactories of straw hats, &c. About 40,000 females are thus annually employed.

LATEST NEWS FROM MEXICO.

It was credibly reported in Vera Cruz, that a great number of Spanish gentlemen and officers have gone from Cuba to Mexico, to command Guerilla parties, and that considerable enthusiasm was inspired in the Mexicans. It is is said that the guerillas line the whole road from Vera Cruz to Mexico, but as yet they have made no resistance to any charge of our troops. Captain Walker's Texan Rangers, (all mounted) had inspired no small amount of terror among the flanking rancheros of Urrea's army. Gen Scott had ordered reinforcements from Monterey, and it was reported had countermanded Gen. Taylor's march on the capital, against which Gen. Scott was proceeding with all possible prudent despatch.

Foreign Items.

Tha French Chamber of Deputies are discussing a postage reform.

There is to be a World's Free Trade Convention at Brussels on the 16th of September.

The Queen of Spain is said to be very expert with the fowling piece. Matters are not mending between her and the man called her husband. She declares if she cannot procure a divorce, she will abdicate her crown and go into exile.

Mary Ann Lamb, sister of Charles Lamb, author of "The Essays of Elia," died recently at the age of 83 years.

Prior to 1683 the alehouse keepers in Yorkshire were required to take sacrament as a qualification to obtain a license.

Miss Burdett Coutts has expended £70,000 in building and endowing churches.

Lord Fitzhardinge declared before the Game Committee of the House of Lords, that the cost of barley for his game in one year was between £900 and £1000.

A man killed 758 rats in one day, in a barn in Shropshire, recently.

From 16,000 to 20,000 persons are relieved weekly in Manchester, at the expense of £1,000.

An Irish grocer announces that he has whiskey on sale which was drunk by George IV., a monarch of tasteful memory.

The fortifications of Paris are beginning to exhibit a Jericho tendency.

A house in London has entered into a contract for one hundred thousand tons of rye meal.

It is reported that the King of Prussia is about to grant a more extensive system of religious toleration than that which exists at present in that kingdom.

For the first time the debates of the Assembly of the States of Lower Austria are published.

The reforming "innovations" of the "new Pope" are still increasing his popularity.

Sheep Shearing.

The annual sheep shearing at Nantucket, which was formerly a great holiday season with Islanders, took place last week. The Inquirer says it was not what it used to be.—There were not more than 5000 sheep to be sheared—a falling off of 2000 from last year. The number of lambs is about 1200. In 1778 there were upwards of 10,000.

Shot.

Two young men named John Burns and James Balf, were shot at Rochester on Saturday night last, by a man named Hisam. Burns died in a few hours. Balf was not severely wounded, and Hisam was taken into custody. The cause which led to the shooting is not stated.

New way to Measure Milk.

THEY USED to measure time by the running of water. Now they measure milk by the running of water, and the more the water, runs, the more the milk measures.

An infamous scamp named Carlin, who, among other villainies, debauched his own daughter, was rode upon a rail, and then ducked, by order of Judge Lynch, at Clinton, Louisiana.

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THE ORPHAN BRIDE.

I gazed upon her lovely form,
In a snowy vest enshrouded ;
Ere stern affliction pierced her soul,
Or her young life's sunshine clouded.

I watched her, in her beauty's pride,
At the altar meekly kneeling,
And mark'd the pale, pellucid drop
O'er her timid blushes stealing.

As she left the holy temple,
Where her youthful vows were plighted,
She knew not that those vows were vain,
Her earliest visions blighted.

Around her gay, yet placid mien,
Was a smile serenely playing ;
The dream of future happiness,
And her present bliss betraying.

No marks of inward bitterness,
Her joyous heart o'erflowing ;
Or thought to chill the glowing warmth
Of affection's sacred glowing.

With glistening locks of raven hue
Was her peaceful brow o'ershaded ;
Reflected in her radiant eye,
The hope that never faded.

Alas, how transient beauty's reign,
And Time's hurried course how fleeting,
Where is the gladsome bosom now,
With holy ardor beating ?

Where, oh where is the spotless gem,
Each gloomy hour beguiling ?
Where, in the bloom of bridal youth,
Is the Queen of Beauty smiling ?

Where the flowrets gem the lowly heath,
And the graceful willows weeping ;
Low, 'neath the dew-bespangled turf,
The Orphan Bride is sleeping.

Virgil.

He was of a swarthy complexion—tall and athletic, but of a weekly constitution. He was so bashful, that, when people crowded to see him, he would slip into some passage or shop to avoid them. His studies, sickness, and the troubles he met with, turned his hair grey before the usual time. He had a hesitation in his speech, like many other great men; it being rarely found that a very fluent elocution and depth of judgment meet in the same person. His aspect and behaviour were rustic and ungraceful. He was of a thoughtful and melancholy temperament, spoke little, loved retirement and contemplation and was an enemy to these talkative impertinents from which no court, not even that of Augustus, could be free.

The Present Age.

The world has never before witnessed so vast an amount of mental activity as now displayed to the inhabitants of this Republic. Our middle class in solid acquirements and extent of formation far surpass, not only the nobles, but the clergy, of former times. Children now grasp philosophical truths that were but dimly discerned, or entire unperceived by the ancient sages. Education is now placing within the reach of the whole industrial population the highest departments of science and learning. Already we may be called a nation of thinking men. Literature has assumed a popular character and the cheap issues of the press bring the poor amongst us to intimate communion with the rich intellects. The effect of all this action upon mind is visible every where around us. Free thought necessarily generates vast diversities of opinion. There is movement of intellect which knows no rest. The hard-handed workers are no longer content with satisfying their natural wants. There are multitudes whom spiritual life is struggling beneath the pressure of material interests. They have fine sympathies, and longings for advancement, and searching into truth, and aspirations after the soul's enjoyment.

Milk and Strawberries.

The two daily trains upon the Erie Railroad bring to New York market 50,000 quarts of milk per day, giving the road a revenue of $250 per day, and making to the city a benefit of $350,000 a year in the article of milk only. The quantity of strawberries brought down this week exceeds 60,000 baskets a day.

Electric Clock.

Much has been said about an electric clock, especially the one invented by Mr. Bain of Edinburgh, and which regulate and works by one in that city others in Glasgow, Perth and Ayr. We therefore present a description of it taken from a foreign exchange :—

The clock is enclosed in a neat oak case, about four and a half feet in height, and one foot four inches wide. Its face is of ample dimensions, very plain in appearance, and is furnished with second, minute and hour hands, in all respects similar to those of the usual construction. The pendulum is of the same length as that of the ordinary old fashioned eight-day clocks. Here, however, analogy ceases. It is true, there are some wheels and pinions to move the hands, and afford accurate indications of the division and progress of time ; but these are few in number, and do their work in a manner totally different from those in other kinds of clocks. The electric clock has neither weight nor spring, nor power of any other kind, within itself, to keep it motion ; and it therefore never wants winding up.

There are two very small copper wires fixed into the angles of the clock case, which communicate with similar wires at the back of the pendulum bar, and are thence continued to a coil of the same kind of wire enclosed in a circular brass box, which box constitutes what is usually termed the bob of the pendulum. The box being hollow, in the direction of its axis, the cavity thus formed admits of the insertion of two sets of permanent magnets, whose similar poles are placed near to, but not in contact with, each other. These magnets are known their places by being enclosed in brass boxes secured to the sides of the clock case. The pendulum is so adjusted that it has, of course, perfect freedom of motion ; whilst in its oscillations it passes alternately the poles of the magnet just mentioned.

There are two copper wires, the ends of which come in contact with those in the case and continue their course along the wall and out of doors and then descend into the earth and are connected, the one with a few bushels of coke, and the other with five or six plates of zinc. These materials are buried in a hole in the earth, about four feet square, and five feet deep, the coke being placed at the bottom with a layer of earth above it, and then the zinc plates are laid thereon and the whole covered up, thus forming a galvanic battery. Here consists the power which imparts motion to the clock ; a current of electricity being induced by the coke and zinc, which, although of low intensity, is unlimited as a quantity, the source whence it is derived being the earth itself. The pendulum being set in motion and the current of electricity through the wires established, a beautiful arrangement of simple mechanism immediately comes into operation, by means of which the circuit is broken and renewed at each alternate oscillation. Thus by the skill of the inventor, the combined agencies of galvo-electricity, electro magnetism, and permanent magnetism, are made to produce an uniform and, so to speak perpetual motion of the pendlum ; and we obtain a time measurer of such extraordinary accuracy that we believe it will bear comparison, in this respect, with the best constructed chronometer.

If it be desired to have other clocks in different parts of the house, that we have been describing requires only to be connected with them by a copper wire and the circuit completed to the battery ; and they will all be kept going by the motion of one pendulum, and record exactly the same time. So also the public clocks in a town, could, by similar means, be made to synchronise.

Profits of Trash.

Dickens' share of the profits of the last number of " Dombey and Son," was *twenty three-thousand dollars*. That's the way of the world. Milton got ten pounds for his Paradise Lost. Wilson the American Ornithologist was never above want—while here a light novelist gets thousands for his useless literature.

It is estimated that the surface planted with corn this year in the State of New Jersey, exceeds that of last year by 100,000 acres, which ought to yield three or four million bushels.

Roman Mosaic Manufactory.

No change appears to have taken place in the mode of manufacture followed there during the last 200 years. A plate, generally of metal, of the size of the picture to be copied, is first surrounded by margin about three-fourths of an inch from its surface. This is then covered over with a coating of perhaps one-fourth of an inch in thickness of mastic cement—composed of powdered Travertine stone, lime, and linseed oil. This is, when set, entirely covered with plaster of Paris, rising to a level with the surrounding margin, which is intended to be exactly that of the finished mosaic. On this is traced a very careful outline of the picture to be copied, and, with a fine chissel, just as much is removed from time to time, as will admit of the insertion of the little pieces of glass mosaic, or as the Italian call it, " smalto." This smalto is composed of glass, and is made in rounds, about six or eight inches in diameter, and half an inch thick The workmen then proceeds to select from the great depository, wherein are preserved, in trays, nearly 10,000 varieties of color, those he may require, which he then works to the necessary shape. This is done by striking the smalto with a sharp edged hammer, directly over a similar edge, placed vertically beneath. The concussion breaks the smalto to very nearly the shape required, and it is then more perfectly ground, by application to a lead-wheel covered with emery powder. The piece thus shaped is then moistened with a little cement, and bedded in its proper situation ; and so on, until the picture is finished : when the whole is ground down an even face, and polished. Six regularly instructed artists are now constantly employed in the Fabrica, at the Vatican. The Florentine mosiac, instead of being composed of a fictile material, is made entirely of marbles, agates, gems, &c., and by means of these materials only, graceful and elaborate representations of flowers, fruit, ornaments, &c., have been produced. Marbles and jaspers of different colors, being, of course, very valuable, are only used in thin slices, like veneer ; and are backed upon slate. The process is extremely tedious, a paper mould having to be cut for every small piece of marble, and each part must be ground at the wheel until it exactly coincides with the pattern. Considering the extreme difficulty of working in such materials, the finished pictures are quite astonishing, and some of the works at present in hand in the Grand Ducal manufactory at Florence, intended for a high altar in the chapel of the Medici at San Lorenzo, will be the most beautiful specimens yet produced. Of course, the demand for such elaborate, and consequently expensive labors, must be very limed ; so that the trade cannot be general.

A Fortunate Soldier.

A Lieutenant of the Rifles, who is now in Mexico, gives his experience of that country in the following manner :

" If these cursed Mexicans did not shoot at one so hard, Mexico would be a delightful country to be in. What am I, who two weeks ago was sleeping upon the hard rock without shelter, doing now ! Why, luxuriating in a real bed, with clean sheets and pillows with fringed cases. At present I board with a very pleasant family, with whom I am on the very best of terms. Lately when I had a slight return of fever, they almost killed me with kindness and attention. From my window I regard a perfect wilderness of beauty—woods, mountains, meadows, and flowers ; numbers of singing birds of beautiful plumage delight the ear and sight. Ozala,! Ozala ! I exclaim with admiration

" You should see our family party at night. A jolly Spaniard plays the harp for *us*—the girls, (three of them) Don Samiago, (another boarder) and Don Diego, (that is to say myself.) We dance everything ; Polkas, Spanish dances, Mexican waltzes ; and the old Padre, a Francisian monk with shaven crown, looks on and says : " Young people, enjoy yourselves now ; when you are old confess your sins." — How pleasant this ! One of the girls (Soliad by name) sings well ard is now writing off for me a Spanish song for C— "

Society, like shaded silk, must be viewed in all situations, or its colors will deceive us.

Novel Invention by Punch—A Piano to be played upon by the Toes.

Every one, is tired of the Ethiopians, and we get so angry as nearly to turn black in the face whenever we hear them mentioned. Something, then, is wanted, of an entirely novel kind, to replace the void which will we hope, be soon occasioned by the clearance of Ethiopians from the face of the town, upon which they remain at present like a dark spot that has hitherto defied the soap of injudicious praise, and the scrubbing-brush of harsher criticism. We propose, therefore, to effect a cure of the prevailing epidemic by establishing a sort of counterirritant ; and we have therefore invented a species of piano, which can be simultaneously played and danced upon by any infant prodigy who is in want of a job ; and as several of them have been some time out of work, there will be no difficulty in finding one to execute the task for which she is required. Our piano will have its keys elongated and widened to such an extent as to form a sort of stage or platform, upon which the prodigy will execute a *solo*, combining a dance and its appropriate accompaniment in the same movement.

The prodigies already performed by the fingers will be arranged for the toes, and some of the most difficult pieces of HERZ will afford ample opportunity for that activity of caper and energy of *entrechat* that the *danseuses* of the present day are so anxious to cultivate. We beg leave to warn the world that we claim this invention as our own patent. It is true we do not yet know how the instrument is to be made ; but the idea is ours, and if any one dares to make use of it, we will bring down upon him the power of an injunction, and the just indignation of the Right Honorable LORD COTTENHAM.

The Spider's Thread.

That any creature can be found to fabricate a net not less ingenious than that of the fisherman, for the capture of its prey—that it should fix in the right place, and then patiently await the result, is a proceeding so strange that, if we did not see it done daily before our eyes by the common house spider, and garden spider, it would seem wonderful. But how much is our wonder increased when we think of the complex fabric of each single thread, and then of the mathematical precision and rapidity with which, in certain cases, the net itself is constructed ; and to add to all this as an example of the wonders which the most common things exhibit when carefully examined, the net of the garden spider consists of two distinct kinds of silk.—The threads forming the concentric circles are composed of a silk much more elastic than that of the rays, and are studded over with minute globules of a viscid gum, sufficiently adhesive to retain any unwary fly which comes in contact with it. A net of average dimensions is estimated by Mr. Blackwall to contain 86,860 of these globules, and a large net of fourteen or sixteen inches in diameter, 120,000 ; and yet such a net will be completed by one species (*Experia apoclica*) in about forty minutes) on an average, if no interruption.

Reverence for age.

Reverence is always due to aged people. God, nature, and a proper education, say to the young, reverence old age. Gray hairs are crowns of glory, when found in the way of righteousness.

The prompting of our kindly nature teach us to respect the aged, to rise up before the hoary head. The dim eye, the furrowed brow, the temples thinly clad who would not respect, reverence, love them ?

I love the youth who reverences the aged always, and whosoever they are. O youth, revere thy aged friend ; respect those silver locks, so whitened by the toiling hardships of many long years.

Anonymous Munificence.

Professor Sears, of the Newton Theological Institution, has received an anonymous letter enclosing three thousand dollars, which the modest and unostentatious writer wishes to devote thus—$2,000 to the support of the President of the Institution, and $1,000 to the funds of the American Baptist Union.

There seems to be every prospect of abundant crops in Long Island and New Jersey.

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NEW INVENTIONS.

Bulkley's Corn Dryer.

Mr. Bulkley, of Kalamazoo, Michigan, has sent us a description of his Corn Dryer, and the plan and dimensions of the same must make it a valuable machine, being easily transported, and put up and taken down very easily. It consists of a steam box, 8 feet long and 38 feet wide and about 3 1-2 feet high, having a sheet iron bottom. The smoke and refuse heat is passed through the bottom into the steam box, and is conducted four times the length of the box before it passes out, by which means the steam generated is heated to the proper degree for kiln drying corn. The tubes through which the corn is passed are four in number, with a hot pipe on each side of the same, and the corn is forced through the tubes by a perpetual screw. The grain pipes are connected together outside the box to prevent all damage by steam, and the grain falls from one to the other and can be passed successively through all the tubes, and the pipes can be increased to any number. The conveying tubes are fixed upon axles like an endless belt and can be moved by spur wheels which turn the conveyers in the direction desired.—The whole intention is to kiln dry by steam, and there can be no doubt of its economy and beside the grain is never scorched. There is a method too of condensing the steam and using the injection water, as a saving of a number of degrees of heat. There are ventilators also, which let in as much air to the dry box as the grain requires to keep off carbonization. This machine has many advantages, among which are simplicity, cheapness of construction, safety from fires, economy in fuel, and the quality of drying grain without scorching. It can be put up to be either used by hand or horse power, or attached to a water wheel, and it can dry to any degree by the passage through any number of pipes. This appears to be the best machine for corn drying we have ever heard of.

Water in place of Oil.

We understand that an improvement has been made in applying water to lucubrate the shafts and journals of machines, in place of oil. It seems that it has been tried on the Jersey City and Paterson Railroad, and found to be successful. It is applied by an ingeniously constructed box, but regarding the exact paln of which we are not clearly informed. Water has been used for a long time in many places instead of oil, for heavy machinery, a stream being continually applied to the gudgeons, and the coupling boxes are so constructed that pieces of raw tallow touched the shaft and were kept always cool by the water, and lasted for a very long time. Applied to Railroad cars a great saving will be effected, as water is worth only its carriage, while oil costs 80 cents per gallon.

New Method of making Glass and Iron.

A Mr. Scott has applied for a patent in England, for making glass out of one material, without any other composition, and which shall be cheaper and stronger than any common glass. Also for a new way to make pig iron from a single material never before used by iron makers, and which will be much cheaper than any other kind.

Improvement in Light Houses.

A gentleman in Oxford, N. Y., has a mode of furnishing light houses with the Drummond light, to be supported by gasses produced by *magneto electrical* machines, which are to be kept in operation by the power of water descending from an elevated reservoir, which reservoir is to be occasionally replenished by pumps operated by a wind mill mounted above the lantern. We shall soon give a cut and description.

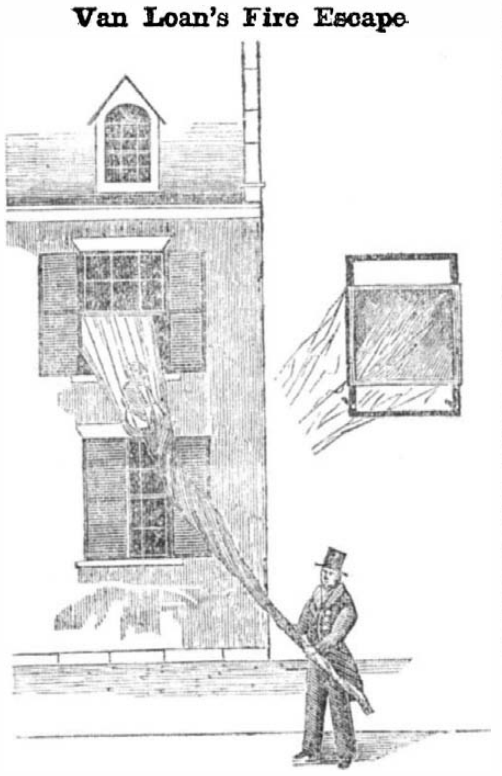
Telegraph Printing.

Mr. Bain, of Edinburg, the inventor of the electric clock, has taken out a patent for a Magnetic Telegraph printing machine, which can print 1000 letters per minute.

New Use for Glass.

They are making in England, a carefully prepared ruby colored glass, as a substitute for the ebony keys of organs and piano fortes.—Quite an improvement we should think, if the touch could be as firm on glass as on wood.

Van Loan's Fire Escape



This simple invention of W. W. Van Loan, Postmaster at Catskill, N. Y., explains itself, because its use is so easily apprehended. It consists of a long canvas bag made and fastened to a frame, which if placed crossways on the inside of the window frame is held perfectly fast. If a person wishes to get out of a house from an upper story when it is on fire, all that he has to do is to throw a ball of twine out into the street, which is fastened to the escape and drawn up. The frame of the escape is then crossed on the window and the bag of canvass twisted up in the form of a screw by persons in the street. The person inside the house gets in and is let down safely to the ground by gradually untwisting the canvas bag. This simple machine will be an effectual help in cases of fire. The canvas can easly be made semi-fire-proof. In the City of London there is a *Fire Escape* Brigade, kept up at no small expense, and which has done much good.

Apparatus for Decreasing the Loss of Heat in Locomotives.

An experiment has been tried on the Brussels and Antwerp Railway with an instrument of the above kind. Its principle is, making use of the gases which go off, carrying with them a large portion of heat after they have left the boiler. It consists of a small heating reservoir placed in the smoke box, but separated from the boiler tubes; it is pierced with the same number of holes, and corresponding with the tubes of the boiler. The water is conveyed from the tender by a fixed pipe under the apparatus and two other tubes fixed higher up, cause a circulation through the heat reservoir. The feed pumps receive their water from a pipe beneath the reservoir. It appeared that there was an average heat of 75° Reamur in the apparatus, obtained entirely from the gasses, which but for this, would have passed up the chimney. It is the invention of Mr. Cabry, chief engineer of Belgian lines.

Harvesting Machine.

A correspondent writing from Michigan to the New York Evangelist, says:

"A field of sixty acres was harvested in two days as follows: A machine was drawn into the field by sixteen horses, guided by as many boys as necessary. On the front of the machine a man was stationed to adjust the forks and circular knives to the height of the wheat which was readily thrown back into the machine. No more was seen of it, till another man in the rear part of the machine was seen tying up well filled sacks of pure grain, in perfect order for the flouring mill.—This huge machine, (of the best wheat,) harvested and bagged three bushels in a minute."

New Kind of Churches.

A London Church-builder provides wood and iron churches for transmission to the colonies. He offers a church with stained glass windows, bell, &c., capable of seating 800 persons, for 500 guineas. But if you cannot afford to buy a church, he will lend you one on hire."

New Method of Smelting Copper Ores.

Mr. Napier of Shacklewell, England, has adopted the following method of smelting, and taken out a patent for it. With every ton of coarse metal is mixed 56 lbs. of soda and 56 lbs of slaked lime. The whole is placed in a smelting furnace and when well fused 100 lbs. of scrap iron is thrown in sprinkled over the surface and well stirred with a rubble The melted metal is then run out into moulds or into water and when sufficiently hardened is removed to shallow pits with water just enough to cover the mass, and there it remains about three hours for the purpose of being partially decomposed and disintegrated.—The water is then let out and the metal left in a moist state for 24 hours, at the expiration of which time it is reduced to powder. After this, the powder is put in a wooden box with holes in the bottom and a wire gauze between, on which is placed the powder and then the box is put in a pit with a vent below the level of the box bottom over which vent is fastened a piece of gauze. The box is then filled with water and the vent opened, and repeated twice. The mass is then put into a calcining furnace and gradually heated so that at the end of 20 hours it assumes a yellow heat which is maintained for six hours longer, the metal being well stirred to prevent caking. It is then withdrawn, sprinkled with water and removed to a fusing furnace, and then to every ton 100 lbs. of anthracite coal in powder is added and 10 lbs. of sand, and if the metal be difficult to fuze, lime and fluor spar is thrown in as a flux, and then when the whole is perfectly melted, it is run into sand moulds and is fit for refining. The patent embraces only the employment of iron and alkaline substances to facilitate the smelting and the treatment of them with water to disintegrate and decompose them. The smelting of ores, is daily becoming a correct and elegant science and considering the value of metals, and their growing use in manufactures, it is to be hoped that some discovery will soon be made for lessening the amount of fuel now used in smelting iron, so that we may yet see that which now costs $60 per ton, sold for $20, with a good profit to the makers and workers.

New Mode of Propelling Vessels.

At the monthly meeting of the Liverpool Polytechnic Society, Mr T. Jones read a paper, and exhibited models and drawings, of a new mode of propelling vessels. The propeller is a modification of the paddle-wheel, and is placed in the stern of the vessel. The wheel is so arranged that only five floats at the bottom side act upon the water at one time, and these in a direct line with the vessel's keel. One peculiarity of the wheel is, that it acts exactly the same, when totally submerged, as the common paddle-wheel does in its ordinary position. Some of the advantages Mr. Jones thinks he obtains by his wheel over the screw are the following:—1. A greater amount of steam-power can be absorbed, as almost any amount of propelling erea can be obtained. 2. Under all circumstances the propelling area will be under water, the bottom edge of the floats being in a line with the vessel's keel. 3 The caseing of the wheel can be made ball-proof, so that it cannot be injured by shot, collision, or any other foreign cause. 4. If an accident does take place at sea, the wheel can be readily repaired: the screw cannot. 5. That, in case of steam-power being dispensed with, the floats can be easily raised, so as to offer no resistance to the vessel's progress when under sail.

Andraud's Compressed Air System of Propulsion.

This system of propulsion on railways has, for some time, attracted the intention of scientific men in France, who are anxious to ascertain how far it can be successfully adopted Dr. Jules Guyot, of Argenteul, having been requested by the Editor of the *Journal des Chemis de Fer*, to inspect the working of the model line now exhibiting in Paris, and to give his opinion thereon, has addressed a letter to that journal, in which he states, he has long since given his opinion on atmospheric propulsion, both by compression and rarefaction; which is, that on the vacum principle, considering all circumstances, it requires a power of *two* to produce the effect of *one*, while, by compression, a power of *one* obtains an effect of one. In this general view of the question, he considers that the system of M. Andraud has an advantage of at least cent, per cent, over that of Clegg and Samuda. The system of M. Andraud, besides having the merit of turning to account all the power expended, presents other advantages, such as absence of leakage, and economy in working. Mr. Nickol's system of working compressed air appears to be identical with that of M. Andraud. A close tube under ground, or alongside the line, is laid the whole length of each section of the tube; above and exactly in the centre of the rails is laid a wood or iron beam, concave on either side, affixed to which are loose diaphragms, of any proper flexible material, which, when uninflated, are pressed into such concavity. Two vertical wheels, or cylinders, also fitting into these hollows, are strongly fixed to the leading carriage of a train, and the air in the underground tube being highly compressed, on opening a valve in connexion with the flexible tubes above, it rushes in, and forcing out the diaphragms, carries the vertical cylinders along with great power, and, consequently the train with it.

Sheathing Metal.

A Mr. Muntz, of London, has taken out a patent for making Sheathing for Vessels. The composition of the metal is fifty-six parts of copper; forty and three quarter parts of zinc, and three and one-quarter parts of lead. The alloy is then cast into ingots, rolled into sheets by preference, at red heat, and annealed; and if desirable, may be polished in the ordinary manner, by using nitric and sulphuric acid, properly diluted. The patentee remarks that the lead acts a very important part in this alloy, as, without it, the fifty-six parts of copper and forty and three-quarter parts of zinc, would not oxydise sufficiently to keep the bottoms of the ships or vessels clean—nor would separate action on the zinc be prevented; and further that, instead of lead, any other suitable metal or metals may be used.

The patentee further states, that he is well aware that it has already been proposed to mix lead or other metals with copper and zinc, and that he prefers lead, although he does not confine himself thereto, nor to the exact proportions before mentioned; for the proportion of copper may be increased, and, of course, the cost; or it may be diminished, but not to be of any utility, below fifty per cent.

Locomotive Speed and Improvement.

The first locomotive built by Stephenson run no more than five miles an hour, and it has been said that this celebrated engineer made the assertion, which he has since lived to condemn, that 10 miles an hour was a speed which was scarcely possible to obtain and which never could be surpassed, but in 1829 the engine that carried the corpse of the eminent Mr. Huskisson, when the Liverpool and Manchester railway was opened, bore it along at the wonderful speed of 28 miles an hour. Last year Mr. Brunell run his engine at 60 miles an hour, and on the Western Railroad from Boston, this same speed has been attained in several instances. Although there has been an increase of speed, there has not been an increase of consumption of fuel, but on the other hand a decrease. In 1829 it took five pounds of fuel to carry one ton, a mile; the same effect is now produced by Stephenson with less than one quarter of a pound.

Bridge at the Point of Rocks.

A charter has been obtained from the Legislature of Maryland and Virginia for a company to build a bridge over the Potomac at the Point of Rocks, and efforts are now about to be made to organize a company to effect the object. The Washingtonian says that it can be done for from 25 to $30,000. Although this sum may seem small, yet it is assured by persons who have turned their attention to the subject, that it is sufficient.

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Our Country.

There is an abundance of broad lands in the Canadas—fertile valleys and lofty mountains are there. There the Hudson Bay sweeps down a mighty sea to its very centre, while rolling rivers continually sweep from the eternal snow capped mountains of the frigid north when the sun of summer smiles day and night on their towering fronts It is bounded by the grandest lakes in the world on the south, and it has the capabilities of inexhaustible resources and unfailing powers of product. Yet with all this plentifulness of becoming great, how different has been the fate of Canada from that of our Republic. As old in years and more favored by the patronage of kings, she ought at least to have been as numerous in inhabitants and far more full of riches. But instead of running a race—a glorious race of power and prosperity with the United States, she has not more than one-tenth of our inhabitants and as far as it regards a complete nation in itself, she can claim no identity to the honor, she is yet in swaddling bands, rocking in the cradle of British wealth and sustained in her late wonderful and spirited improvements of ship canals (which we honestly admit shames us not a little,) by the gold of the mother country and the enterprise of England. The United States on the other hand, is not a dependency—she cares not for the smile, the frown or the sceptre of a prince—she is one in herself—an independent grown up man. She wields her own power, transacts her own business and stands forth at the present moment before the gaze of the world "taking her for all in all," as the most splendid country on which the sun shines. There is indeed no perfection on earth, and we have our faults and our failings as a people and a government, but we can discuss the evils—we have the power of remedying the defects—and for this blessing it is the duty of all to labor for the good and advancement of our country and people, to a still higher destiny. The great secret of our nation's greatness is freedom—freedom to plant —freedom to reap. Here are people from all quarters of the earth, and here are their descendants. How is it, then, that we are so much more prosperous than other nations? We answer—freedom—yes, freedom is the nursery song of patriotism, enterprise, bravery and success, and it is by drinking from its pure fountain that we are refreshed as we journey onward in the march of civilization, on the broad highway of national greatness. It was the spirit of freedom which kindled the bosoms of that people, who under the guidance of the God of Battles, were led forth from the land of bondage by a pillar of fire and the pillar of cloud. It was the spirit of freedom which crowned Thermopylæ and Leonidas with imperishable glory. It was the exhibition of freedom at Bannockburn which still thrills down upon the memory of six hundred years and lights up with enthusiasm the feelings of the present age, as it did those of the past, when they heard the stirring war note—"Liberty at every blow, let us do or die." It was the spirit of liberty which animated men and women to the most sublime sacrifices for conscience sake. It was the spirit of freedom which animated the martyrs to brave the tyrant's smile, the tyrant's frown, the dungeon, the gibbet, the fire and the sword. It was the starlight of freedom which kindled up the spirits of our forefathers, and led them to dare, do and die for those liberties which have made us great and happy. And now the sublime scene comes sailing up on the memory of seventy one years. The infant colonies of America have dared to resist the unjust will of tyranny—they have raised the hand of rebellio and blood has been shed. As yet treason has not been added to resistance—but the fatal moment pregnant with awful importance has arrived. It was an eventful morn for Liberty and America. One act was but wanting to consummate the dreadful proscription "traitors to the crown." "Behold the hoar is at hand" It is the fourth of July, seventeen hundred and seventy six. Independence Hall of Philadelphia is filled with men—men in whose hands are placed the destinies of their country. A committee has been appointed to draw up a statement of their grievances and a declaration of their intentions. The document is read—an immortal instrument. It recommends an immediate separation from the dominion of Britain—and those who are favorable to its sentiments must subscribe to its contents. For awhile not a whisper is heard. The tick of a watch, or the fall of a feather might be detected—it was not the ear, it was the heart that then listened. Proscription, slavery, or death, were on the one hand, and but faint gleams of triumph and freedom on the other. God it was an awful moment then —"it was the hour of heroes." For an instant each heart was busy with itself. God, country, wives, children and parents, rose up before the mind. We think we can see the deep eternal thought that sat upon each brow—that in a moment scanned an age of contingencies. Then it was that freedom trembled on an *examen*, but the golden weight is cast in freedom's scale. An aged patriarch rises from his seat and sternly marches up the silent aisle — The snows of more than seventy winters have silvered his locks, but he looks like the snow capped tropical Ararat. He stands before the table on which lay the instrument for signature, and he turns round and looks upon his co-patriots in peril. Each eye is fixed, each heart is attention. They perceive the blood of Wallace and Knox mantling his furrowed cheeks, and their spirit gleaming in his eye as he lifts up his hand and exclaims—"there is a nick in the affairs of men on which mighty events turn, we perceive it before us. This head in the common course of things must soon go down to the grave, but I would rather that it should go down there by the hands of the executioner, than desert my country at this moment of her peril. I hope that every man here will sign that document." The magic fount of freedom was touched, the sound as of a mighty rushing wind filled the assembly with freedom's divine inspiration.—Then the bold flash of Hancock's pen towered up like a beacon on Plymouth's sainted rock. Then rolled the handwriting of fifty five heroes pledging with him their lives, fortunes and their sacred honor, to the cause of freedom. Europe, as well as America had her children there—freedom was the watchword and freedom the reply. It was a sublime scene —nothing from the remotest antiquity can compare with it, and that instrument ornamented with the signatures of fifty-six patriots will go down to futurity as the fairest chaplet which adorns the crest of Liberty

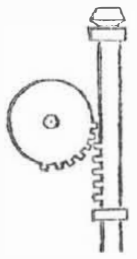
Next Sabbath day's bell will toll the seventy-first anniversary of our National Independence—what a day for gratitude to the Giver of all Good, who has brought us safely out of the land of Egypt and made our people like the sands on the sea shore for multitude. The Declaration of Independence laid the foundation of our nation's greatness. But the end is not yet—much remains yet to be done—misery still broods over the homes of thousands, and the time has yet to come

"When plenty shall wait on the labors of all."

That our country is an instrument in the hand of Providence to bring about such an event, no one will doubt when he takes a survey of what has been done for the universal elevation of man and the spread of freedom since the Fourth of July, seventeen hundred and seventy six. The strife for our country's freedom is over, let the enmity of the struggle be also forever forgotten, and let us struggle for glory in scientific research for the benefit of all, and may the struggle between the mechanics and scientific men of this country and Europe, be now the objects of our contention, and honorable in peace, ennobling in all her actions to the supremest heights of science, knowledge and liberty, may our country and our people be elevated; but as we progress in power, in wealth, in knowledge and in glory, never let us in the pride of our hearts forget, that to be *great in goodness* is the greater honor—it is the aim of freedom and the only *true* glory of Our Country.

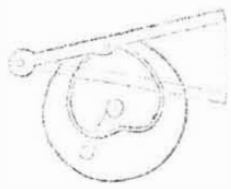
MECHANICAL MOVEMENTS.

Reciprocating Rectilinear Motion.



This cut is an exhibition of the manner in which perpendicular motion may be communicated from circular. As the wheel revolves the wiper raises the stamper or ram, and when the notches are passed by the rack in the stamper it falls the distance of the rack nearly. It is upon his principle that piles are driven down to gravel and clayey bottoms in the building of docks, &c., by means of the batteriin ram driven by a notched wheel windlas.

Transverse Motion.



There is no study so complex yet so interesting to the mechanic in regard to the different changes of motion from the first mover, as that which goes under the denomination of eccentric motion, produced by what are called cams. The cam may be of any shape whatever, it is a pattern for a certain kind of stroke or a certain kind of motion continued until the pattern is run over, as in a last, an axe helve machine, &c., and as shadowed by the above, which nearly displays the methods in which the treads of a power loom are moved, when both the treads are fixed to one permanent [illegible] and moved by eccentric cams, which re[illegible] by circular motion. We believe that [illegible] the principle of a curve traversing a [illegible]ht line, all machines for cutting by pat[illegible]rn have been invented, and last winter, instead of using knives for cuters in last, oakrel and all other pattern machines, stationary circular saws have been applied to cut lengthwise, the pattern gearing moving on the saws and revolving, instead of the knife revolving by the pattern crossways. Whether this is a better method than the other we have not been informed, but the above cut represents how simply the form of a heart can be communicated to a straight line from a circular motion and from this idea we can trace the various ingenious application of all pattern cutting machines and other eccentric movements.

Important Decision.

It has been decided in Scotland, in the case of an Odd Fellows' Lodge, that a majority of the members have no power to break up the Lodge, and divide the funds between the individual members. The Court held that "so long as an Association adheres to the principles upon which it is founded, and applies its funds to the purposes intended, it is not in the power of a majority of its members to dissolve the Association, and to seek a distribution of the funds for their own private use, contrary to the original intention thereof, and in violation of the agreement under which they became members, and under faith of the integrity of which others became members.

Quotations

It is a grand thing to be honest in borrowing matters, so that what we borrow may not through selfishness be appropriated in the manner of genteel thievery. For instance, when we make the mistake of Rodmer for Bodmer, and see the stupid R copied and spread over as a new piece of information in a contemporary paper, and the honest B blunderingly queried, we are apt to suspect that some person was scalding his tongue in a hasty dish of another person's soup.

Telegraph Shipwreck.

A severe storm passed over Albany last week and a most violent explosion of electricity took place in the telegraph office, disabling the relay magnets of both lines. The wires attached to the relays and to the battery were for a time perfectly useless.

Mechanics Mutual Protections.

No. 5 of this city meets on Thursday evening, at the corner of Avenue A and 1st street.

No. 11, meets same evening, at the corner of Bleecker street and Cottage Place.

No. 12, meets Monday evenings, in 16th street, between 7th and 8th avenues.

No. 18, meets Monday evenings, corner Hudson and Grove streets.

No. 19, meets same evening, in same room as No. 11.

No. 28, meets on Friday evening, at No. 111 Bowery.

No. 37, meets on Friday evening at the corner of Broadway and Lispenard street.

Three new Protections have been instituted during the last month in Michigan; 1 at Grand Rapids, 1 at Marshall, and 1 at Jackson. Information regarding the above associations in this city can be obtained of James S. Huyler, Deputy Grand Protector, N. Y., corner of Bleecker and Downing streets.

Telescopic Vision.

There is a story in the New Orleans Delta, of the discovery of a child in St. Mary's parish, in the interior of Louisiana, that possesses the wonderful power of seeing with the naked eye what other people take a telescope to perceive, while to things that are perfectly near he is almost blind. The writer of the article says that he has unusually large eyes, but not prominent, and that having a small telescope of power sufficient to observe the satellites of Jupiter and Saturn, he directed the boy's attention to these planets, and in a moment he saw the satellites like three golden marbles around old Jupiter, and Saturn in the same manner by four, the boy observing with his eye and the writer of the article with his telescope, and it would seem the boy's eye was found to be as correct as the instrument and more powerful. We cannot tell whether this story is true or not, but it appears to be at least a visionary one.

Damages for Violating a Patent.

After a trial of six days, a case between Herrick Aiken, of Franklin, N. H. vs. Stephen C. Bemis, of Springfield, Mass., for the infringement of a patent for an improvement in the saw-set, was brought to a close in the U. S. circuit court last week, by a verdict for the plantiff, giving $2000 damages. Judge Sprague presided. The evidence in relation to the rise and progress of the saw-set extended back to nearly half a century.

Cheap Fuel in the West.

By statements made in an able article from the pen of C Whittlesey, of Ohio, it seems that coal can be delivered at Cleveland at $2½ per ton. If such a streak of good luck would cross the track of New Yorkers as to be able to buy coal at $3 or even $4 per ton, cold winter might blow its worst—we would be perfectly independent. Now is the time for mechanics to club together and purchase their winter's fuel.

Lead at Galena.

It is said that there is an amount of lead now lying on the wharves at Galena to the value of twelve millions of dollars. Fifty millions pounds of lead were registered in Galena last year, and it is supposed that if the mines in that district were well worked, they could produce the enormous amount of one hundred and fifty millions of pounds.

To New Subscribers.

Those subscribing to the Scientific American will be furnished, if desired, with all the back numbers of the present volume. Bound together at the end of the year, they will form a handsome and valuable work.

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The History of Printing.

(*Continued from No.* 40.)

The art soon spread abroad and presses were set up in several parts of Germany, of which Bamberg, Cologne and Augsberg are the most celebrated. In 1469, two of Faust's workmen were invited by some Doctors of the Sorbonne to Paris, and about the same period two Germans began to practise their art at Rome. A press was established at Florence, another at Venice, and these and other Italian presses were so industrious that in the nine years between 1471 and 1480, we are informed that 1297 books weae printed south of the Alps.—A Greek Grammar was printed at Milan in 1476, and a Lexicon, four years afterwards.—Hitherto when any Greek words occurred in a book, blank spaces were left, and the pen inserted them. In 1480 Hebrew characters appeared, the work of two Jewish Rabbis.—South of the alps, the printers were busy; and in 1473, a gigantic work being an Encyclopedia, in ten folio volumes, was printed by Mentelin at Strasburg. Presses were set up at Basle, and at Utrecht, Louvain and other places in the Low Countries. Several towns in France issued specimens of typography, chiefly in the Latin language. It has long been a disputed point what was the first work in the French tongue; some connoisseurs supporting the Garden of Devotion, by Mansion of Bruges; whilst others are firm in setting forward the Romance of Count Balduni of Flanders, printed about 1474. Two years after that date, a large volume called the Chronicles of St. Denis, was printed at Paris.

It was about this period that the art was introduced into England by William Caxton, who, after he had served his apprenticeship to a London Merchant, went abroad, where he remained some years. Some say he was sent over by Edward IV. to negociate a treaty with the Duke of Burgundy. Whilst resident at Cologne, he translated into French, a work on the history of Troy, by the direction of the Duchess of Burgundy, and printed it. A copy of this book, sold at the sale of the Duke of Roxburgh's books a few years ago, for £1000. Not long afterwards he come to England, and set up a press in Westminster under the patronage of the Abbot, and the first book he produced, related to the game of chess, and in 1447 he published a translation from a Latin compilation entitled "Dictes and Sayings."—Altogether he printed sixty-four w rks; but the date of his death is not accurately known. None of his books are very important in a literary point of view, but the number of them shows that he had exercised his art with industry. Caxton had a cotemporary of the name of Letton, but he produced only eleven works the majority of which were printed when he was a partner with William Machlimar. Wynlyn de Worde succeeded old Caxton, and from his press issued 408 works between the years 1493 and 1534. Robert Pynson had the title of King's Printer given to him, and he printed in thirty-eight years 210 works. A native of Cologne carried the art to Oxford about 1480, but at Cambridge the earliest books are dated 1521. A Breviary published at Edinburgh in 1510, is the first specimen of the art in Scotland. A religious work on the Virgin appeared at Valencia in 1474, and this was the first printed book that Spain produced.

The characters of the early printers are remarkable for their size and rudeness. They were usually Gothic, mingled with imitations of hand-writing. The date and printer's name are frequently wanting, and a regular title page was not often given. The colon and the full stop were the only points in use at first.—The elder Aldus introduced the giving a mark or emblematic vignette; and we find monograms or cyphers containing the printers initials or some curious device, in fashion. A bibliographer can tell by a glance who was the printer of any work from his device. Faust and Schoeffer are said to be the first who gave their initials. Caxton had three devices, so had Wynhyn de Worde. John Day who issued works between 1546 and 1584 had a little wood cut representing a landscape on which the sun was rising, and a man was rousing a sleeper with the words "Arise for it is day." In progress of time the pages were numbered, and abbreviations, with which the books of early printers abounded, were discountenanced. Errors sometimes were very numerous, and it became advisable to accompany printed volumes with a list of errata. A work printed in 1561 called the Anatomy of the Mass, has a list of errata extending to fifteen pages, although it is only a thin book of 172 pages, a notice is prefixed to the list by the corrector, a pious monk, who accuses Satan with being at the bottom of the blunders, and that to ruin the work he had first steeped the manuscript in filthy water, and then befooled the printer's brains and fingers.

(*To be continued.*)

Old Psalm Tunes.

To forward the favorable reception of such tunes, two facts, as to their original intention, must be practically borne in mind. They were sung faster than we usually sing them, and, what is better, by a far greater number of voices. It is a great mistake to suppose that old tunes should be sung in a heavy, drawling style. Our fore-fathers in the church were cheerful Christians. A psalm of a dozen verses was but short to them. Hence, as well as from other circumstances, it is clear that they sang in a quicker and livelier manner than is commonly conjectured. The old hundredth tune is made a dirge in our days, but in theirs it was a joyous and an animating canticle. "All people that on earth do dwell, sing to the Lord with cheerful voice!" In like manner York tune, which is shelfed among the dull and the absolete, was, little more than a century ago, the liveliest and most popular tune of the entire kingdom. But to hear old tunes to advantage they must be sung in old style. Not only must they be sung with decent gravity and cheerful sanctity, and by masses of people, but by a multitude of voices, "by all the people together," as the original directions state. Six thousand voices were wont to be heard at St. Paul's Cross, and "three or four thousand singing at a time in a church of this city is but a trifle" said the excellent Roger Ascham in a letter from Augsburgh, dated 14th May, 1551. When tunes are sung after this fashion, an intelligent organist and a well-disciplined choir will still find enough to do. But in what they thus may find difficult to do there will be an energy and an interest with which few are now familiar.—*Hackett.*

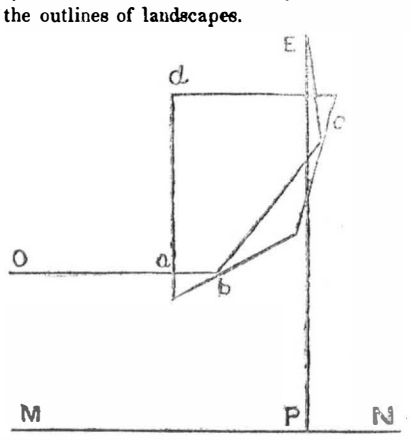
London Docks.

"A visit to the London Docks is a fatiguing operation. A kind friend who knows the ways of the place accompanied us, having provided himself with that important document—an order to taste the wines. The dock we visited is not the largest, but probably contains as much in value as any other. There are 15,000 pipes of wine in the cresent vaults alone, and 5,000 above. In the port of London, there are now in dock 100,000 casks of various sorts. A vat for mixing wines, in the Cresent, will contain 10,200 gallons; here old and new are minglad. In matters of temperance the British are far behind us. We saw a number of the professional tasters hanging about; one, at least, I can vouch for it, has a peculiar discoloration of the nose. With lighted links, we traversed this underground world, and then emerged to the enormous warehouses above; the construction of the whole is a triumph of ingenuity and strength. In the warehouses great masses of ivory tusks are encountered; wax, tea, cork, sugars, in quantity beyond your previously conceived ideas—the very drippings from the hogsheads would be a snug fortune. The black liquid is carefully swabbed up from under foot and purified. It is calculated that £30,000,000 sterling worth of goods are now in dock occupying no less than 160 acres; 1,200 houses were pulled down to construct the London Docks alone; there are three others still larger. We inspected rooms full of silk in a raw state, having in them 3,150 bales, brought from Turkey, China, Persia and Italy, and assorted into colors ready, for the English manufacturer. One single room contained 1, 500 large bales. The rooms containing Tuscan straws ready for plating were very attractively neat. We saw half an acre of cinnamon."—*J. J. Smith.*

The population of Montreal in 1800 was 8000, principally French Canadians. In 1847 it is 50,000.

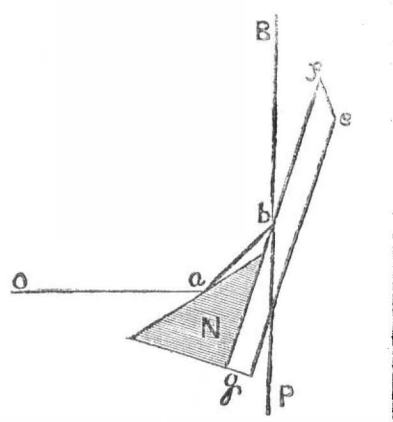
The Camera Lucida.

This instrument was invented by the celebrated Dr. Wollaston. The object intended to be obtained was, to enable persons who has no knowledge of the rules of drawing, or perspective, to deliniate distant objects and trace the outlines of landscapes.



It consists of a quadrangular prism of glass, *a b c d*, by means of which the rays of light are bent by two reflections into a path of right angles to their first direction. A ray of light from O enters into the prism at *a*, and runs along to the other side *b*, it then makes a very acute angle and is wholly reflected in the direction *b c*. At *c* again it meets the side of the prism and is reflected in the direction *c* E. The eye being placed at E, sees the image of the object on the surface of the prism at *c*, and refers it to P, on a plane M N, which may be covered with a sheet of white paper, and the outline of the object traced with a pencil.

The construction of the Camera Lucida may be varied in several ways, and the following cut represents a form different from the first. A parallel piece of plate glass *e f g*, is connected wih a reflecting mirror *a*. The ray of light proceeding from O, is reflected from the speculum at *a* to the plate glass at *b*, and thence reflected again to the eye at B.



The frame on which this instrument is placed has an angular opening at the top through which the eye receives the image and is prevented from receiving the rays coming directly from the speculum N, (metalic mirror.)—The image, or scene, is referred to a plane below at P, where the pencil can be seen through the glass "the eye to guide the tracing hand." In order to increase or lessen the size of pictures, the prism is mounted on a brass frame supported on pillars that are made to be either lengthened or shortened at will. A third plate, of brass, is affixed to the upper surface of the prism having a small hole in it for the operator to look through. A convex lens (outward rounded glass) may be placed over the hole in the brass plate for the purpose of magnifying the image, or a concave lens placed before the prism to adapt it to short sighted persons. This instrument is very convenient, because portable But no person who desires to be a true painter should use one, for the poetry—the inspiration of the "art divine,"—would be tamed by the mechanical operation. Sometimes the Daguerreotype Obscura is called the Lucida.

A Big Bone.

In the process of digging for the foundation of a new building at the corner of Nassau and Ann streets, last week, an immense bone was found at the depth of 17 feet below the surface of the ground. It is apparently the thigh bone of a Mastodon, 3 feet 6 inches in length, and weighs 28 lbs. A rusty bayonet of an ancient fashion, was found near it. at the same depth.

TO CORRESPONDENTS.

"B. G. of G."—We have received your letter and drawing of the *hydraulic wheel.* As it regards its utility, experience alone is the true test. The principle is somewhat novel, but we doubt its equality to the wheels in common use. There are a number of machines for turning, but perhaps all different from yours. To tell all their peculiarities would be no easy task.

"W. W. J. of Michigan."—We would reason, that as the River Raisin has a fall of 10 feet to the mile above the Island, that there is a possibility of striking another vein of water lower down of greater power, as from the drilling it appears that there are different strata of limestone, sand and gravel. We use the term boring for drilling. There is a machine for drilling with the flat or chisel jumper, invented, we believe, by a Mr. Goodrich, who resides in Wisconsin, we forget the town. The spring pole, for your purpose, is the most economical machine. It may not be that you will get the water to raise so high as you desire, but we shall send you a paper that will give you all the information to suit your purpose.

"H. F. of Michigan."—We have received the drawing of your boiler and engine, and would say to your first question, "the engine is novel, but as for the boiler we cannot tell, but we have this to say that Stephenson's boilers have 38 square feet more surface exposed to the fire than you have. The expense of patenting will be about $10 for each. For the separate views of your drawings it will cost all of $10 for engravings, (cuts yours) insertion nothing. You are aware that it is impossible to answer from your description, the amount of power. We shall be able to give you the other information desired, soon.

"G. B. S. of N. Y."—It is not possible to tell whether or not a patent has been taken out for a stove constructed upon the principal of yours, as no less than 46 patents were taken out last year alone for stoves. The design covers not the improvement. A patent will cost you about $40, and an application will not be examined without the payment of the regular fee at the Patent office.

"E. W. of Mass."—To your first question we answer, that, we know of no such engine being patented. To your second, we doubt the practicability, but without a knowledge of your plan it is impossible to judge. There is not so much power lost in turning the centres as some suppose. Look at the superiority of speed in our steamboats with their long cranks, over those with the short stroke made in Europe.

"W. B. of Mass."—Your method of producing heat without combustion, depends on the friction to which you submit the air.—Your cylinder is on the principle of the atmospheric condenser, which is correct in theory and practice. The construction of your valves must be different from the common kind, as they must be opened and shut by rods from the outside, as you will easily perceive when you try the experiment. You will discover that until a certain degree of compression is arrived at, the results you anticipate will not be effected. Your experiments are devoted to a most important object—a substitute for fuel—persevere.

"H. of Ill."—If you look upon page 100, of this volume Scientific American, you will see a description of a wheel, like the one about which you have written, invented by Mr. Davenport, of Mass. It was highly spoken of, but the result of its action, we have not heard. It appears to be the exact counterpart of the one referred to in your drawing. It is not prudent to take out a patent unless there is a certainty of a profitable investment in the machine.

"M. J. E of C."—Some good engineers say that it takes less fuel to a boiler capable of standing a pressure of 60 lbs. to the square inch, than one of 30 lbs. The shape of the boiler and the arrangement of the flues, are the main points. And there is another thing more wonderful still. The English locomotives with only 30 square feet of heating surface, consumed more fuel than the ones now made 108 square feet of heating surface—see another page. We shall give you other information in the next number.

"J. W. of N. Y."—We have received your

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drawing with the enclosed description, and will attend to your directions next week.—The expense of a patent would be about $40. and nothing with which we are acquainted would prevent you getting your invention patented. To your other questions we could not now give a direct answer, as you are aware that it might be wrong advice if we answered yes, and it might not, as circumstances shape adversity often when we do not expect it.

"H. L. H. of Va."—You have been misinformed in regard to galvanized tin. The metal referred to must have been zinc, Galvanized tin does not possess those high qualities about which you have been informed, and is not in common use here. See a good article on electro-protection of metals in our last number, which was republished by request.

"G. G. of N. Y."—If by doubling the strokes of your engine by means of the groove for the thimble to slide, will there not be a loss of power with the gain of speed. We view the subject in this light, though the application is ingenious.

"C. S. of Mass"—We know of no reason why you cannot secure a patent for your Bath.

"H. G. B. of Mich."—From the very great amount of business in the Patent Office, it has been impossible to examine applications for about 30 days after they are made. The information you desire regarding conflicting claims or rejection of patents, will be found in full in No. 6, vol. 2, of Scientific American. Drying grain by steam is not a new thing, but your method certainly is, so far as we know.

"J. S. of Ohio."—We have received your communication and will attend to your request. All came safe.

"L. H. of Watertown, N. Y."—You have been wrongly informed, we are not in want of travelling agents.

"G. R. B. of Tarrytown, N. Y."—Your bundle was sent per steamer Arrow, last Monday.

"J. M. M. of Port Henry, N. Y."—We filled your order and forwarded the package by Livingston & Wells' Express on Tuesday.

☞In consequence of the frequent mis-direction of letters addressed to this office i. e., in often directing to the Editor, letters that pertain to the business of the Publishers, and vice versa, we are induced, in order to remedy the difficulty, to request our worthy correspondents to address all their communications hereafter to the publishers, whether they be upon business of the office, or soliciting or imparting information upon scientific or mechanical subjects.

A Philanthropist.

There lives in the City of Boston, a man named John Augustus, who is in some respects the most remarkable man of his age. He is a mechanic by occupation, and some years being in the Police Court of that city, his attention was called to the case of a young man, poor, needy and probably vicious, who was charged with a simple assault. Augustus stepped forward, offered himself as his bail, took the young man home, fed and clothed him, and gave him employment. He reformed and became a good citizen. His success in this instance prompted to further efforts, without fee or reward, and two only of them have abused his confidence. He has thus saved the city several thousand dollars in fees and costs, and the risk has not been half so great as if he had endorsed five hundred and eighty-two of the best men's notes in the city of Boston. More than two of them would have been protested. He is a good man and a most useful citizen. May he long live to continue his work of benevolence.

A New Sea Steamer.

The Iris, a new and beautiful steamer, of not the the largest dimensions, appeared off the Battery, on Monday, and ran down the Bay in fine style, making her seventeen miles an hour. She is said to be perfect in accomodations, model, construction and arrangement. She was built for Messrs. Mason & Thompson; her hull by Bishop & Simonson, her engine by John Kemble, of the West Point foundry. She is to run to the West Indies, but will make a trip to Charleston, S. C. and back as a packet. She will leave on this voyage in a few days.

Sale of Joseph Bonaparte's Estate.

The beautiful grounds and mansion in Bordentown, belonging to the estate of the late Joseph Napoleon Bonaparte, ex-king of Spain, were sold at auction for thirty thousand five hundred dollars. Mr. Thomas Richards, of Philadelphia, was the purchaser. It is said that the buildings alone cost over $60,000 — The painting, sculpture, furniture, &c. sold at much lower rates than was anticipated, some articles being sold for half their value. The paintings brought from $10 to $1,050. Two Lions and a Fawn, by Rubens, sold for the largest sum. "Nativity of our Saviour," by Raphael, brought $1000. The Portrait of a Dog, by Hackerts, brought $210. The picture of Napoleon crossing the Alps, by David, the proprietors refused to put up unless the sum of $6000 was bid for it. As no person present was willing to bid that sum, it was passed—and will be sent to Europe.

Missionary News.

A letter from Dr. Judson, dated Rangoon, March 2, 1847., states that the house in Maulmain, in which his effects were left had been burnt to ashes. His clothes and his wife's, all their American presents, and every article of value, were consumed. He is allowed to remain in Rangoon in the character of a minister of a foreign religion, but is strictly prohibited from making proselytes. The succession of the late King's son has produced no change for the better.

Powder Mill Explosion.

The powder mill of Laflin and Smith of Saugerties, N. Y., located near the line of Green county, exploded on the 24th. The mill was destroyed and about 1600 lbs. of powder. The hands fortunately were absent at their evening meal.

Relics from the Wreck of a former World.

The author of this work has presented us a copy of his new and interesting book, bearing the above title, which we have taken much pleasure in perusing. It is for sale at Graham's, Tribune Buildings; H. Long & Brothers, 32 Ann st, and Burgess, Stringer & Co. 222 Broadway. Price 25 cents.

The American Architect.

This is the title of a beautiful new work to be issued monthly, at the low price of 25 cents per number. The design of the publication is to introduce a new and beautiful style of architecture throughout the country. The plates are good, all lithograph, executed by Jones & Newman, Sun buildings. The cost of houses according to the plans published, is fully stated, and full specifications. C. M. Saxton, 205 Broadway, Publisher.

A CARD.

We having purchased the entire interest o the Mechanics Journal, heretofore published in Albany, would request that all new subscribers forwarding names or money for the paper would address their communications to this office MUNN & CO.

New York, June 25th, 1847.

Patrons of the Mechanics' Journal.

All those who are indebted to the former publishers of this paper, are respectfully requested to make immediate payment for the same to Joel Munsell of Albany, Robert Macfarlane of this city, or to the publishers of the Scientific American. Those subscribers who have paid for a part of the volume of the Journal, are hereby informed that when the time is up for which they have paid their papers will be stopped, unless they remit again.—Many will expire with the present number.

ADVERTISEMENTS.

☞ This paper circulates in every State in the Union, and is seen principally by mechanics and manufacturers. Hence it may be considered the best medium of advertising, for those who import or manufacture machinery, mechanics tools, or such wares and materials as are generally used by those classes The few advertisements in this paper are regarded with much more attention than those in closely printed dailies.

Advertisements are inserted in this paper at the following rates:

One square, of eight lines one insertion,	$ 0 50
" " " " two do.,	75
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" " " " one month,	1 25
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" " -	Wm. Taylor & Co.
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Troy, N. Y., - - -	A. Smith.
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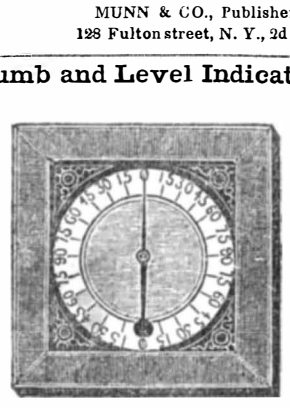

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CURIOUS ARTS

Receipts.

We are often puzzled at the amount of false receipts which we see daily published in various papers, most of which are perfectly useless. No receipt ought to be published confidently, unless it has been the subject of experiment. There is one thing which we are sorry to see and which they display, viz. a great and universal want of science. We have seen a receipt for making wood incombustible by a mixture of soda, flour paste, and clay. Alum and soda alone possess the incombustible qualities, without the use of the plaster. Alumina is the basis of all clays. Again, we have seen in more than one paper, a great number of receipts on coloring, purporting to be new and discovered lately in London. To dye an orange, the receipt says, " take curcuma, tartar and the muriate of tin nnd boil five minutes" (the goods.) " To dye green use the same stuffs only add *chemic blue*," that issulphate of indigo, " and boil the same length of time as for yellow." This is destruction indeed. The muriate of tin will destroy entirely the effects of the chemic, and silk will take on no color by boiling. We say never boil silk to dye it. Another receipt for cotton black says, steep the cotton in the chloride of lime. This is shocking. The chloride of lime is the stuff used to bleach, discharge colors, not dye them. To those of our mechanics' or farmers' wives or daughters, who wish to dye silk, we say, never boil it, but use the dye at a good heat. We will shortly give a number of receipts on dyeing and the method of using them and will recommend the same as practical, cheap and in successful use by the best dyers.

Again, we perceive in a cotemporary paper, a receipt for making incombustible paper, by infusion in a dilute solution of alum and gunpowder." Such utter ignorance of chemistry ! What use is the gunpowder as it regards an incombustible, unless it be just to destroy by its combustible qualities, a portion of the incombustible quality of the alum.

Relief for Tooth Ache.

The following receipt for this painful disease is taken from the Hartford Courant. " Some years since I found the following receipt in a highly popular dental work, and having used it with the most gratifying success from that time to the present, in common cases of toothache, it strikes me I may be instrumental in relieving some suffering by making it public.

Take Sulphuric Ether 2 oz.
Pulverized Gum Camphor 2 drachms.
do. do. Alum 2 do.

Mix and keep tightly corked. Wet a little cotton or lint with the mixture and apply to the seat of pain The above quantity can be obtained of any druggist for 10 or 12 cents.

This preparation has been simply the result of scientific investigation.

H. PRESTON, Dentist."

How to Color Green.

Put two ounces of indigo into four ounces of oil of vitriol, (sulphuric acid) about two weeks before you want tocolor, shaking it well every day. When ready for coloring make a strong decoction of black oak bark, sufficient to wet what you design to color. To this add one pound of alum to every eight pounds of yarn, stirring it till all the alum is dissolved Then pour in of the mixture of indigo, till you think you have it of the shade desired.—Then put in the yarn, as much at once as you can ; let be over the fire for twenty-five or thirty minutes ; then lift it out to air for a few minutes, and then return it to the kettle and let it simmer three hours, stirring it frequently. The two ounces of indigo will color about ten pounds of yarn deep green, and five pounds pale green. The pale green is managed in the same way, only use a less quantity of indigo.

The above receipt is taken from the Ohio Cultivator, and it is different from the too many published, because it is a correct one.—Fustic, however, will answer in the place of oak bark. The indigo must be powdered and of the best quality.

Hatching Fish.

Hatching eggs by artificial heat is well known and extensively practiced in China ; as is also the hatching of fish. The sale of spawn for this purpose forms an important branch of trade in China.—The fishermen collect with care on the margin and surface of the water, all the gelatinous matters that contain spawn fish, which is then placed in an egg shell, which has been fresh emptied, through a small hole, which is then stopped and the shell is placed under a sitting fowl. In a few days the Chinese break the shell in warm water, warmed by the sun. The young fish are then kept in water until they are large enough to be placed in a pond. This plan counteracts the great destruction of spawn by troll nets, which have caused the extinction of many fisheries Go away with your egg-hatching machines after this.

Curiosities of Art.

It is singular how some men have directed their energies of mind to perfecting toys, which although displaying wonderful inventive powers, yet have never conferred any benefit on mankind, or have ever been used for any other purpose than as a piece of amusement, the childish exhibition of a masculine mind, the fame of foolery, the foolery of fame.

Thus Jerome Faba, an Italian priest, and a native of Calabria, exercised himself in a species of industry, wonderful from its difficulty. He finished a work of box-wood, which represented all the mysteries of the passion, and which might be put in the shell, of a walnut. To him was attributed a coach the size of a grain of wheat, within which there were to be seen a man and woman, a coachman who drove it, and horses who drew it. These were presented to Francis I. and Charles V.

In China the tomb of Confucius has been made in small miniture no larger than a out but wonderfully composed of precious metals and adorned with a profusion of gems ; but its chief value consists of the labor expended on its execution. Its landscapes, dragons, angels, animals, and human figures would require several pages of description, which after all would, without a view of the model, prove tedious and unintelligible.

Charles the fifth of Spain had a watch which was confined in the jewel of his ring, and a watchmaker in London presented George the third with one also set in the same manner. Its size was something less than a silver two-pence; and it contained one hundred and twenty-five different parts, and weighed altogether no more than five pennyweights and seven grains.

The Tomb of Raphael executed by an Italian named Raccavala, is indeed a wonder. It is only twelve inches in height and from an inch to four inches in diameter, it is adorned with various architectural ornaments, in the richest style of Gothic, and also figures of the Virgin and child. The work is said to be of unrivaled merit and beauty. The model is contained in a case of wrought gold, and is itself of box-wood. The general design may be regarded as architectural, embelished with several compartments of sculpture or of carving, consisting of various groups of figures. These display different events in the life of Christ. Some of the figures are less than a quarter of an inch in height; but though thus minute, are all finished with the greatest precision and skill; and what renders this execution still more curious and admirable is the delicacy and beauty with which the back and distant figures are executed.

We may from time to time give some descriptions of the wonderful curiosities of art, to show that like the ancient Greek, some men have been engaged in pitching peas through the eye of a needle.

Hit it at Last.

A YANKEE has just completed a very important invention. It is designed for country editors, and when perfected, will cut out items, patch trowsers, grind out poetry, rock little responsibilities, stuff bustles and dun delinquent subscribers.

THE ART OF PAINTING.

(*Continued from No.* 40.)

LANDSCAPE PAINTING ON WALLS OF ROOMS.

Having painted the space above the horizon, as before directed, the practitioner may proceed to mature the principle design for the work, as will best accomodate the situation and circumstances; and the outlines of this design may be drawn upon the walls, with a small brush, attached to the end of a rod or staff two or three feet long; the brush being dipped occasionally in dilute sky-blue. As a general rule, a water scene,—a view of the ocean or a lake,—should occupy some part of the walls, where there is sufficient space, and where such design will be seen to advantage. Other parts, especially over a fire place, will require more elevated scenes, high swells of land, with villages or prominent and elegant buildings. On the more obscure sections of the walls, especially such as are expected to be partly obscured by furniture, high mountains. with cascades or farm hills may be represented. Small spaces between the windows and the corners, may be generally occupied by trees and shrubbery rising from the foreground and without much regard to the distance. The designs in this ork, are usually classed in what is termed *five distances*, the first of which is called the foreground, and occupies the lower section, and is based on the dadoe line. The trees on this ground are usually drawn from three to six feet in height, and other objects in proportion. The second distance, (indicated by the cottage in the cut) generally includes all objects which are near enough to admit of full natural colors in the painting, and is the proper distance for representing, hunting, military, or sporting scenes. Forest trees on this distance are ordinarily drawn six to twelve inches in height. The third distance (indicated by the island) is that in which objects are drawn on a scale of about one inch to ten feet, and in which the objects appear somewhat obscure by the distance. The fourth distance, (corresponding with the highland cape) is that in which the objects appear in a faint blu sh tint, and on a scale of an inch to fifty or sixty feet,—the trees being hardly distinguishable The fifth is the extreme distance, in which mountains and highlands appear of a pale blue, even in clear weather. It is not uncommon for one distance to extend gradually into another; but as each general distance, requires a peculiar set of colors, it is most convenient to class them in this manner. A correct knowledge of the general principles of this branch, is more important and more difficult to acquire by the learner, than the art of drawing and finishing individual objects. We shall proceed to describe the process of compounding and applying the principal foundation colors.

(*To be continued.*)

The Weathercock.

This instrument is very useful to the farmer. It should be erected on a very conspicuous part of the steading, which may readily be observed from one of the windows of the farm-house. Its cardinal points should be marked with the letters N. E. S. W. to show at a glance the true point of the compass. The vane should be fitted up with a ball or box containing oil, which may be renewed when required. There is not a neater or more appropriate form for a vane than an arrow, whose dart is always ready to pierce the wind, and whose butt serves as a governor to direct it to the wind's eye. The whole should be gilt, to prevent the rusting of the iron. With regard to the origin of the name of weathercock. Beckman says that vanes were origicut out in the form of a cock, and placed on the tops of church spires, during the holy ages, as an emblem of clerical vigilance.

Stockings, the Feet, &c.

Much more of comfort to the feet depends on the stockings than people are aware of ; nothing can be worse than a stocking too large or too small, the more common case is its largeness, a cotton or thread stocking tucked under at the toe, by the perspiration of the foot becomes quite hard and compact.

The best stockings for general wear are those made of lamb's wool. The pedestrian well knows the difference on a long day's walk between a cotton or linen stocking and one of wool ; he knows that the former soon becomes hard, damp and chilly, with the moisture of the foot, whereas the latter enables him to bear fatigue, defends his foot from the friction of the shoe, secures it from blisters, and in every way ministers to his comfort.

Singular Streams.

In Franklin County, Northern New York, is a brook formed from two streams, which are intermittent; they are very singular in that character, sometimes being perfectly dry for twenty hours together, and then again flowing freely. It is supposed they are fed by some underground syphon, for it is noted that they are never dry in the hot summer weather, when other streams generally fail, and never cease to flow for more than a day at a time ; they stop flowing very suddenly, and when at the highest have been known to stop running and dry up at once.

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